



# Investment Book of Record (IBOR)

## Cloud-Native, Real-Time Position and Cash Management

Accessing accurate and timely cash and position data is challenging for asset managers. Multiple sources of data and dependence on daily feeds from the back office can hinder operations, increase the risk of position errors, and add additional costs.

Charles River's Investment Book of Record ([IBOR](#)) provides the front office with a global, multi-asset view of cash and positions in real time to help drive better decision making and streamline operations.

Designed from the ground up to run securely on the cloud, IBOR's event-based model allows managers and traders to create multiple aggregation views without multiple books or reconciliations. As an integral component of the Charles River Investment Management Solution ([Charles River IMS](#)), IBOR is designed to provide consistent management of position data on a single platform.



## Benefits

Charles River's IBOR solution was built with scalable, resilient, cloud-native technology that enables:



- Access to the latest enhancements with continuous deployment of new capabilities
- Improved investment decision making with consistent, real-time cash and position data from front to back office
- Utilize the data for reporting without creating a new book requiring reconciliation
- Global & multi-region snapshots for intraday & historical data
- A centralized golden source of position management with multi-asset class support
- Greater consistency, transparency, and operational control across the investment lifecycle
- Unrealized and realized P&L views by strategy, location, and as-of a point in time
- Real-time corporate action and cash flow processing and comprehensive exception and monitoring workflows

# Position Management

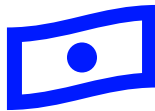
Charles River's IBOR solution manages current and historical positions, with accurate trade-date and settlement-date positions for a specified point in time, based on transactions and adjustments.



## Position Keeping

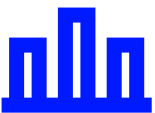
IBOR also maintains real-time positions and tax lots. Positions are constantly updated with the latest available transactions, events, security and market data.

IBOR's event-based architecture enables the capability to dynamically retrieve historical positions, including valuation, based on any combination of "as-of" and "as-on" dates for reporting and performance analysis. Managers can access updated views of data to see what has changed or view the original on what is now known for the historical reporting date.



## Profit and Loss (PnL)

IBOR calculates hundreds of granular, component level, and real-time PnL values including cost, market value, unrealized and realized gain loss, dividend and interest income, amortization, fx component gain/loss. Local and base security level profit and loss (PnL) values are also calculated at a component level, enabling greater visibility and insights into individual security and overall portfolio/sleeve performance, compliance, and collateral management.



## Valuation

Calculates valuation for each position based on the latest pricing data available in Charles River IMS. While position valuation generally runs end-of-day, it can also be run/re-run intra-day. For OTC derivatives, fair value is based on internal Charles River IMS analytics, or imported by the manager.



## Security Life Cycle Events

Charles River IBOR handles cash flow payments throughout a securities lifecycle as well as the maturity of securities through end of day processing. Throughout the lifecycle of a security, scheduled coupon payments, paydowns, and other appropriate transactions are processed and posted in IBOR. At maturity, appropriate transactions are generated to close out positions and generate necessary cash transactions. Charles River IBOR additionally allows clients to process life cycle events at the strategy level.



## Transaction Management

Our solution supports transactions from multiple sources, including trades, corporate actions, reconciliation, and from external sources such as a bank, custodian, or external trading system. Managers also have the flexibility to edit, cancel, and re-book transactions or resolve exceptions.

## Consistent Data from Front to Back Office



### Corporate Actions

Charles River's IBOR can automatically handle mandatory and voluntary corporate actions as an overnight process, as well as directly from the interface. Capabilities include:

- Automated processing of mandatory events.
- Manual intervention anytime during the process.
- Updating open orders and the security master with impacts from corporate actions.
- Managing voluntary corporate actions based on elected position changes.
- Backdating corporate actions and properly update any subsequent position records.



### Reconciliation

The IBOR Solution helps ensure accurate reconciliation of positions against accounting systems, custodians and fund administrators. The system is highly automated, making it easy to build flexible, manager-defined matching rules for exception-based workflows. Other features include:

- Ability to reconcile both position and tax lot levels against multiple data sources.
- Support for multi-sleeve accounts against data sources that are not sleeve-aware
- Managers determine the scope of each reconciliation to prepare for next-day trading in different regions.
- The system identifies any positions that are missing, or outside of manager-defined tolerances. Accepting external positions automatically creates adjustment transactions that modify positions and records.



# Charles River Development, A State Street Company

Investment, wealth and alternative managers, asset owners and insurers in over 30 countries rely on Charles River IMS to manage USD ~\$58 Trillion in assets. Together with State Street's middle and back office services, Charles River's cloud-deployed front office technology forms the foundation of State Street Alpha®.

Charles River helps automate and simplify the investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout.

Charles River's partner ecosystem enables clients to access the data, analytics, application and liquidity providers that support their product and asset class mix.

We serve clients globally with more than 1,250 employees in 11 regional offices.

(Statistics as of Q2 2023)

Learn more at [crd.com/ibor](https://crd.com/ibor)

Charles River Development - A State Street Company is a wholly owned business of State Street Corporation (incorporated in Massachusetts).

This document and information herein (together, the "Content") is subject to change without notice based on market and other conditions and may not reflect the views of State Street Corporation and its subsidiaries and affiliates ("State Street"). The Content is provided only for general informational, illustrative, and/or marketing purposes, or in connection with exploratory conversations; it does not take into account any client or prospects particular investment or other financial objectives or strategies, nor any client's legal, regulatory, tax or accounting status, nor does it purport to be comprehensive or intended to replace the exercise of a client or prospects own careful independent review regarding any corresponding investment or other financial decision. The Content does not constitute investment research or legal, regulatory, investment, tax or accounting advice and is not an offer or solicitation to buy or sell securities or any other product, nor is it intended to constitute any binding contractual arrangement or commitment by State Street of any kind. The Content provided was prepared and obtained from sources believed to be reliable at the time of preparation, however it is provided "as-is" and State Street makes no guarantee, representation, or warranty of any kind including, without limitation, as to its accuracy, suitability, timeliness, merchantability, fitness for a particular purpose, non-infringement of third-party rights, or otherwise. State Street disclaims all liability, whether arising in contract, tort or otherwise, for any claims, losses, liabilities, damages (including direct, indirect, special or consequential), expenses or costs arising from or connected with the Content. The Content is not intended for retail clients or for distribution to, and may not be relied upon by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to applicable law or regulation. The Content provided may contain certain statements that could be deemed forward-looking statements; any such statements or forecasted information are not guarantees or reliable indicators for future performance and actual results or developments may differ materially from those depicted or projected. Past performance is no guarantee of future results. No permission is granted to reprint, sell, copy, distribute, or modify the Content in any form or by any means without the prior written consent of State Street.

The offer or sale of any of these products and services in your jurisdiction is subject to the receipt by State Street of such internal and external approvals as it deems necessary in its sole discretion. Please contact your sales representative for further information. State Street may from time to time, as principal or agent, for its own account or for those of its clients, have positions in and/or actively trade in financial instruments or other products identical to or economically related to those discussed in this communication. State Street may have a commercial relationship with issuers of financial instruments or other products discussed in this communication.

©2023 STATE STREET CORPORATION